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MOLD FOR CENTRIFUGAL CASTING
[ENSHIN CHUZO YO KANAGATA]

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Specification

1. Title of the Utility Model

Mold for Centrifugal Casting

2. Scope of Patent Claims

A mold for centrifugal casting, characterized in that an inner mold 5 divided into two is inserted into an outer mold 4 with an integrated structure; and the inner molds 5 are fastened by tapered surfaces 4b formed at the inner periphery of said outer mold 4.

3. Detailed Description of the Utility Model

Industrial Application Field

The present utility model relates to a mold for casting that is used in centrifugal casting.

Prior Art

As a mold that is used in centrifugal casting, there has been a mold divided into two in the vertical direction. At the time of casting, these molds a are bound with a fastening band as shown in Figure 2, or centrifugal casting is carried out in a state in which brackets c protruded to the fitting part of the molds a are fastened with fasteners e as shown in Figure 3.

¹ Numbers in the margin indicate pagination in the foreign text.

Problems to Be Solved by the Utility Model

However, in any of these methods, since a gap was generated in the fitting joint by a centrifugal force of several tons which was applied to the molds a for centrifugal casting, casting burrs were generated in cast products by a melt leaked into the gap, and a large number of process was required to remove these casting burrs.

In addition, in the molds shown in Figure 3, in which the brackets c were protruded to part of the molds a, since the balance of the molds a was poor, it was necessary to mount the molds at a centrifugal casting machine so that their balance was attained, and labor and time were required for the mounting.

The present utility model has been proposed to improve the aforementioned inconveniences.

Means to Solve the Problems and Operation

A mold for centrifugal casting, characterized in that an inner mold divided into two is inserted into an outer mold with an integrated structure, and the inner molds are fastened by tapered surfaces formed at the inner periphery of the outer mold, preventing a gap from being generated between the inner molds at the time of continuous casting.

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Application Example

Next, the present utility model will be described in detail by an application example shown in Figure 1. In the figure, 1 is a centrifugal casting machine, and 2 is its turntable that is rotated at high speed in an arrow direction by a driving source not shown in the figure.

3 is a mold body placed on the aforementioned turntable 2 and consists of outer mold 4, inner mold 5, and upper mold 7. The outer mold 4 has a cylindrical shape with a bottom, and tapered surfaces 4b with a sequentially decreasing diameter toward a bottom plate 4a are formed on the inner peripheral surfaces. At the same time, the inner mold 5 is housed in the outer mold 4 from the top. The aforementioned inner mold 5 has a structure divided into two in the vertical direction. A cavity 5a for casting is formed in the inner mold, and the upper part of the cavity 5a is opened to the upper surface. In addition, the outer peripheral surfaces of the inner mold 5 become tapered surfaces 5b fitting to the inner peripheral surfaces of the aforementioned outer mold 4, and the inner mold 5 is inserted into the outer mold 4, thus being able to mutually, sturdily compress the divided inner molds 5 by the tapered surfaces 4b of the outer mold 4.

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On the other hand, 6 are several support levers vertically installed on the aforementioned turntable 2, and both ends of

the aforementioned upper mold 7 are inserted into the upper ends of the support levers. The aforementioned upper mold 7 closes the upper side of the cavity 5a and fastens nuts 8 spirally mounted at the upper ends of the aforementioned support levers 6, so that the inner mold 5 is inserted into the outer mold 4, thereby opening a pouring opening 7a of a melt at the central part.

Effect of the Utility Model

According to the present utility model, as mentioned above in detail, since the inner mold 5 divided into two is inserted into the outer mold 5 with an integrated structure and the inner molds 5 are fastened with the tapered surfaces 4b of the outer mold 5, a large fastening force can be obtained by a wedge effect of the tapered surfaces 4b. For this reason, even if a melt is poured into the cavity 5a and rotated at high speed by the centrifugal casting machine, no gap is generated between the inner molds 5. Therefore, since cast products without casting burrs can be obtained, a large number of processes are not required, solving the inconveniences. At the same time, since there are no unbalanced protruded articles in the

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mold body 3, the mold can also be easily mounted in the centrifugal casting machine 1. In addition, since the outer periphery of the inner mold during casting is restricted, the

Figure 2

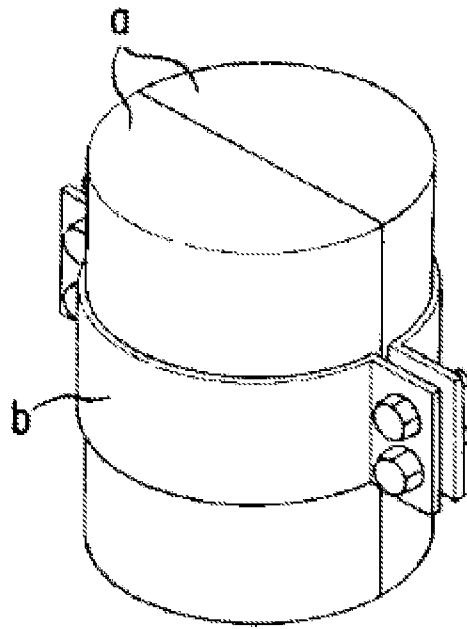


Figure 3

